GLOBAL CLIMATE HIGHLIGHTS

MAJOR CLIMATIC EVENTS AND ANOMALIES AS OF MAY 18, 1991

1. Northern Alaska and Northwestern Canada:

MILD WEATHER ENGULFS REGION.

Temperatures averaged 3°C to 8°C above normal for the fourth consecutive week, with daily departures reaching +10°C in parts of the Yukon [4 weeks].

2. Central United States:

INCESSANT RAINS CONTINUE.

Widespread moderate rainfall (25–75 mm) was reported throughout the region, with scattered heavier totals (80–220 mm) measured in southeastern North Dakota, north-central Iowa, southeastern Texas, southern Louisiana, western Tennessee, northern Mississippi, and central Alabama. Since early April, surpluses of 200–600 mm have accumulated across eastern Texas, Louisiana, Mississippi, and southern Arkansas [8 weeks].

3. East-Central South America:

RAINFALL SLACKENS IN MOST AREAS.

A small portion of southern Paraguay, northeastern Argentina, and adjacent Brazil measured 60–120 mm, but only scattered totals exceeded 30 mm elsewhere [Ended after 6 weeks].

4. Western Europe and Northwestern Africa:

UNSEASONABLY COOL CONDITIONS PERSIST.

Well below normal temperatures (weekly departures of -3°C to -6°C) again affected the region, with the higher elevations of Italy and Switzerland reporting very large negative departures (down to -10°C) [5 weeks].

5. Eastern Europe and the Northern Middle East:

ABNORMAL WETNESS EXPANDS.

Anomalously high precipitation totals (20–75 mm) were measured throughout most of the eastern half of Europe and the northern Middle East, with larger amounts (up to 150 mm) in scattered portions of the Alps, southern Germany, and western Yugoslavia. Since early April, 80–160 mm above normal precipitation has fallen on parts of Germany, Austria, Italy, and the Balkans. According to press reports, resultant floods took nearly three dozen lives in Turkey while flooding and heavy mountain snows triggered landslides, closed roads, and forced the Danube River out of its banks in portions of Austria [6 weeks].

6. West-Central Africa:

WET SEASON COMMENCES EARLY.

During the last four weeks, the rainy season has brought abnormally large totals from Cote d'Ivoire and southern Mali eastward through northern Nigeria and southern Niger. Much of central coastal equatorial Africa recorded 50–200 mm of rain last week while 25–90 mm dampened the Sahel from southern Mali eastward to Chad. Scattered locations have measured 60–160 mm of excess rainfall since early April [4 weeks].

7. Southern Africa:

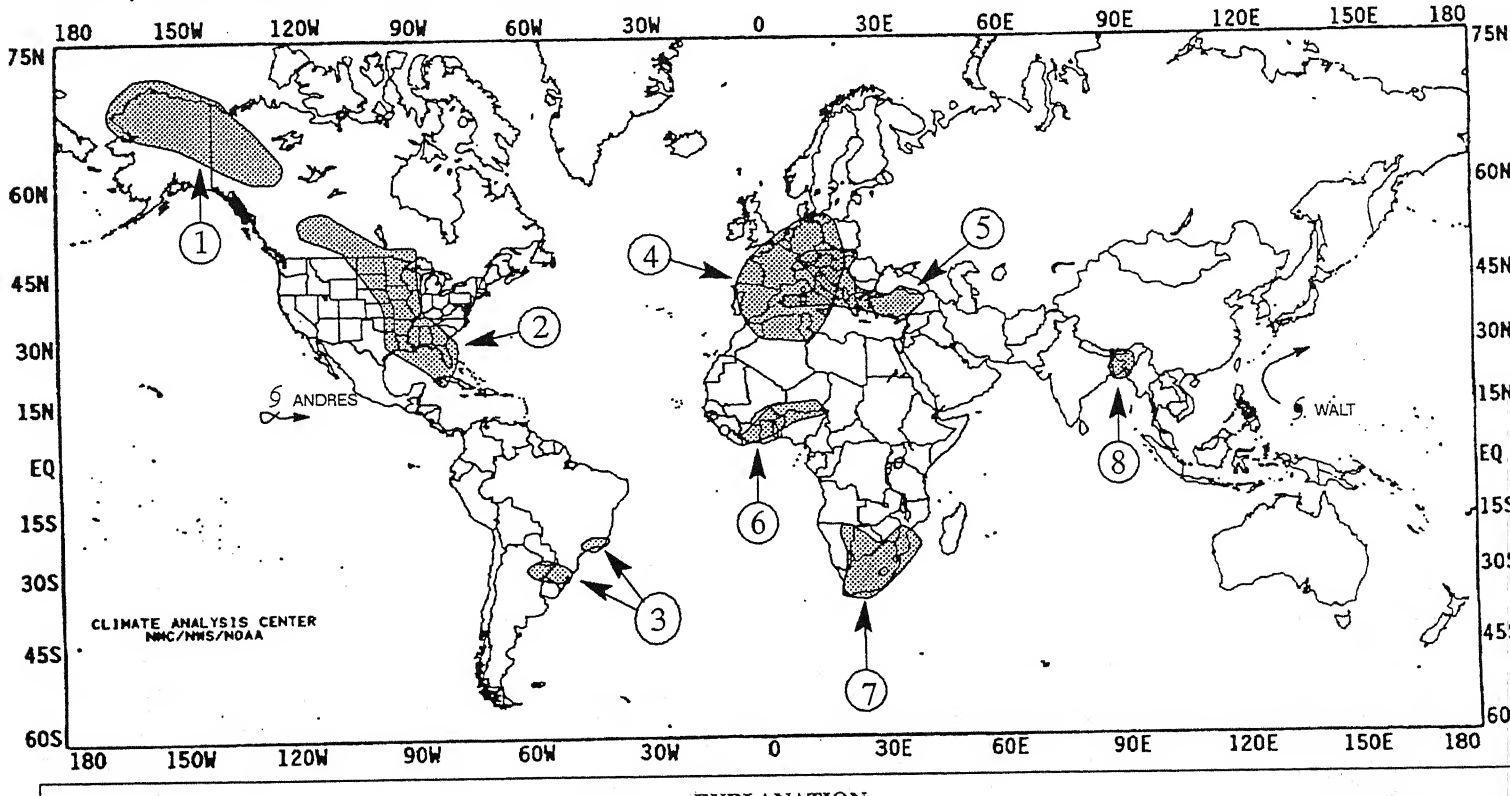
RAINFALL DEFICITS DIMINISH WHILE WARMTH RETREATS SOUTHWESTWARD.

Only isolated light rains fell on the region, but shrinking normals accompanying the approach of summer have allowed significant moisture deficits to significantly decrease [Ended after 7 weeks]. In addition, near to below normal temperatures swept from Mozambique and eastern South Africa westward through north-central South Africa, Zimbabwe, Botswana, and eastern Namibia, restricting weekly departures above +3°C to the Namibian and western and southern South African coastlines [Ending after 5 weeks].

8. Bangladesh:

CONDITIONS IMPROVE SOMEWHAT.

Spotty heavy rainfall brought new flooding that took dozens of lives and left hundreds of individuals homeless early in the week, but press reports indicate that marked falls in river levels were observed throughout the saturated northeastern part of the nation late in the week. Unfortunately, reliable rainfall measurements are lacking [Ending after 3 weeks].



EXPLANATION

TEXT: Approximate duration of anomalies is in brackets. Precipitation and temperature data are this week's values, unless otherwise indicated.

MAP: Approximate locations of major anomalies and episodic events are shown. See other maps in this Bulletin for current two-week temperature anomalies, four-week precipitation anomalies, longer-term anomalies, and other details.

UNITED STATES WEEKLY CLIMATE HIGHLIGHTS

FOR THE WEEK OF MAY 12–18, 1991

Summer-like weather arrived early in the eastern half of the nation as highs soared above 90°F as far north as the northern Plains and upper Midwest. Several dozen record daily highs were established or tied from the southern Plains to northern New England, and portions of the Great Lakes and upper Midwest reached between 10°F and 20°F above normal. International Falls, MN soared to 85°F on Wednesday, their third record daily high during the week. Meanwhile, strong thunderstorms continued to soak parts of the South. Up to 8.6 inches of rain fell on portions of northeastern Mississippi while nearly 6 inches was measured in parts of flood-ravaged Louisiana. Strong thunderstorms were not confined to just the South, however. Severe storms battered parts of the mid-Atlantic, Midwest, northern and central Plains, and Rockies. Some storms generated wind gusts up to 100 mph, causing extensive damage to houses, buildings, trees, and power lines from North Dakota to Texas. Dozens of tornadoes touched down from the Great Plains to Florida. According to press reports, nearly three dozen homes were damaged in Kansas on Thursday after a number of tornadoes moved through the state. Tornadoes also touched down in Idaho. Farther east, lightning from strong thunderstorms moving through Washington, D.C. injured several individuals and took one life. Elsewhere, wintry conditions gripped parts of the West. Heavy snow blanketed parts of the Rockies, Cascades and Sierra Nevadas. Up to 18 inches of snow was measured at Winter Park, CO. Farther north, unusually mild conditions persisted over extreme northern Alaska while heavy rain drenched southern parts of the state, with nearly 4 inches reported at Ketchikan.

The week commenced with a dome of high pressure dominating the eastern half of the nation. A warm, moist flow of air on the western side of the high produced muggy, summery weather from the Great Plains to the Atlantic Coast. In addition, numerous record high daily minimum temperatures were established across portions of the northern Plains and upper Midwest as lows only fell into the sixties. To the west, a cold front stretched across the High Plains advanced slowly eastward. Much cooler air behind the front collided with the warm and humid conditions to the east, setting the stage for severe weather. Strong thunderstorms erupted from North Dakota to Texas, bringing heavy rain, hail, wind gusts up to 90 mph, and several tornadoes. One storm soaked southeastern North Dakota with over 4 inches of rain. Farther south, hail piled up on portions of I-70 in Kansas, making driving treacherous for a short time while flash flooding affected parts of Tarrant County, TX after 3 inches of rain fell in less than an hour. The front eventually pushed into the Midwest, spawning over a dozen tornadoes in Iowa and Illinois on Tuesday. Meanwhile, warm and muggy conditions continued in the East with record daily highs observed from Florida to New York. In sharp contrast, a quick-moving storm system pushed into the Far West, ushering in cooler conditions, spreading rain across portions of Oregon and northern California while snow fell in the Cascades and northern Sierra Nevadas.

The storm system in the West intensified and moved into the central Rockies by Wednesday, bringing over a foot of snow to portions of Colorado and Wyoming. The system spawned severe weather as it tracked into the Great Plains. Strong thunderstorms dumped up to 6 inches of rain in south-central South Dakota which caused flash flooding. To the south, over a dozen tornadoes moved across Kansas, causing extensive damage to over two dozen homes near Wichita, according to press reports. Meanwhile, another cold front pushed southeastward through the Midwest and Ohio Valley. Strong thunderstorms dumped heavy rains and spawned numerous tornadoes in portions of the Midwest. The front eventually worked to the mid-Atlantic, generating more thunderstorms that dumped heavy rain and produced fatal lightning in Washington, DC. Farther west, a second storm system tracked into the Far West, spreading heavy rain and snow, depending on elevation. Salem, OR established a record for rainfall in a 24-hour period when more than two inches fell on Friday. The storm system tracked into the Rockies by the weekend, dumping snow across the mountainous areas of the Southwest.

According to the River Forecast Centers, the greatest weekly totals (more than 2 inches) fell along the central and southern Gulf Coast, portions of the central Plains, most of the deep South, northern Florida, the Atlantic Piedmonts, the South Carolina coastal plain, the southern and central Appalachians, portions of the Ohio and middle Mississippi Valleys, southern sections of the upper Midwest, western Oregon, and southern Alaska (see Table 1). Scattered heavy amounts were recorded in central Florida, south-central Texas, portions of the northern Plains, the northern and central Rockies, and northern California. Moderate amounts were measured across most of New England, the mid-Atlantic, the Great Lakes, the remainders of the Ohio and Mississippi Valleys, the northern and central Plains, the eastern half of Texas, the central Rockies, the Pacific Northwest, southern Alaska, and eastern Hawaii. Little or no precipitation was observed across extreme southern Florida, the coastal mid-Atlantic, the northern half of Minnesota, most of Oklahoma and northern Texas, the remainder of the northern Rockies, the Southwest, the Far West, the rest of Alaska, and Hawaii.

Unseasonably warm conditions enveloped the eastern two-thirds of the nation. Weekly departures between +8°F and +14°F were common from the southern Plains northeastward to northern New England as readings soared to 90°F as far north as southern Maine (see Table 2). Departures between +3°F and +7°F covered most of the nations midsection from the Rockies eastward to the south Atlantic Coast. In Alaska, unusually mild weather was limited to northernmost sections. Near to slightly above normal temperatures were recorded across the remainder of the state.

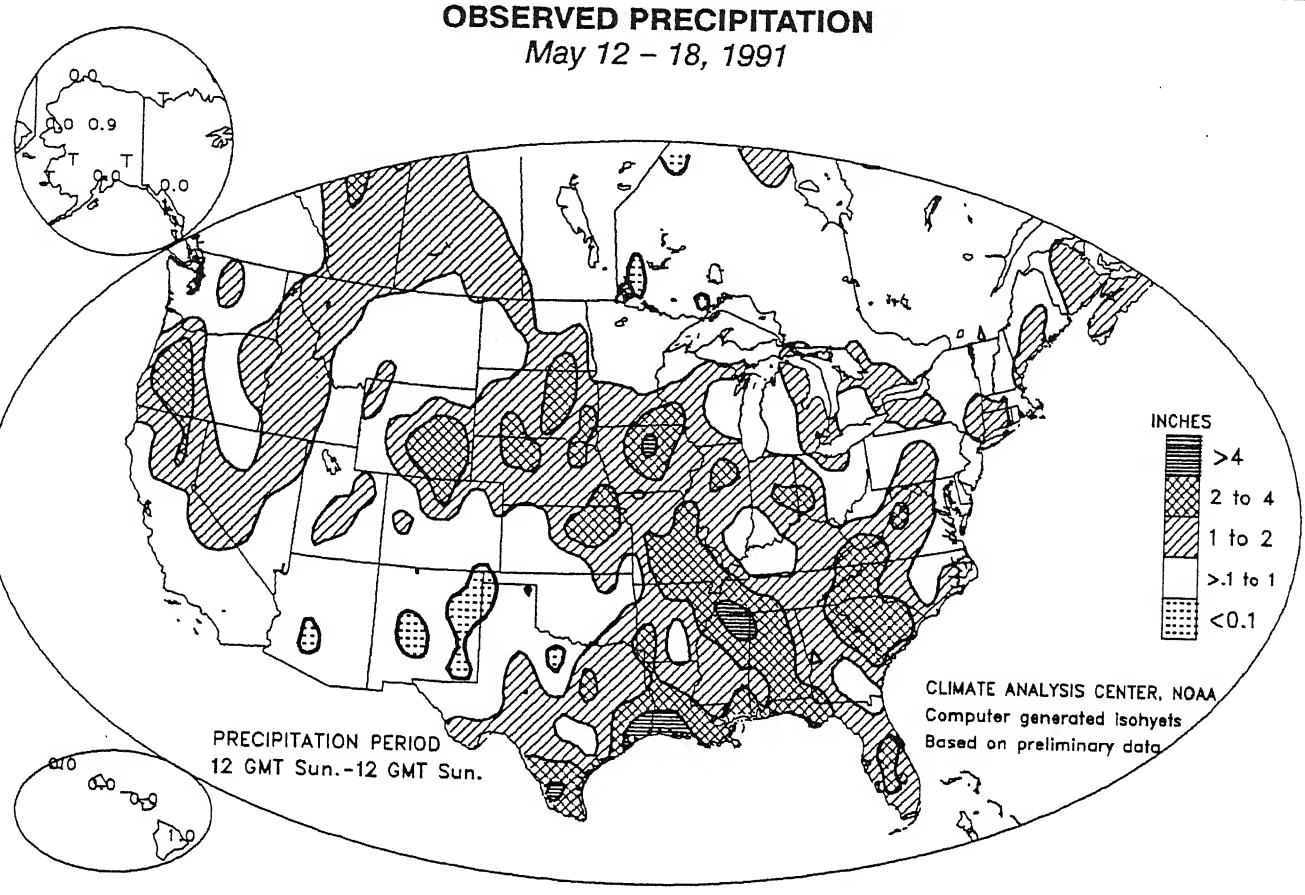
Unseasonably cold weather prevailed across the remaining third of the contiguous U.S. Weekly departures between -3°F and -9°F were common from central California to eastern Utah (see Table 3). Temperatures were slightly below normal elsewhere.

TABLE 1. *SELECTED STATIONS WITH 3.00 OR MORE INCHES OF PRECIPITATION DURING THE WEEK OF MAY 12 – 18, 1991*

STATION	TOTAL (INCHES)	STATION	TOTAL (INCHES)
PORT ARTHUR, TX	5.13	LAFAYETTE, LA	3.47
GALVESTON, TX	4.82	TEXARKANA, AR	3.44
KINGSVILLE NAS, TX	4.39	MEMPHIS NAS, TN	3.43
NORFOLK, NE	4.22	BLUEFIELD, WV	3.42
MASON CITY, IA	4.17	WATERLOO/MUNI, IA	3.32
TUPELO, MS	3.87	SIOUX FALLS, SD	3.21
AUGUSTA, GA	3.81	ABERDEEN, SD	3.17
RUSSELL, KS	3.78	SPRINGFIELD, MO	3.12
EUGENE, OR	3.61	MONTGOMERY, AL	3.07
WACO, TX	3.52	ORLANDO, FL	3.00
BILOXI/KEESLER AFB, MS	3.50		

OBSERVED PRECIPITATION

May 12 – 18, 1991



DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)

May 12 – 18, 1991

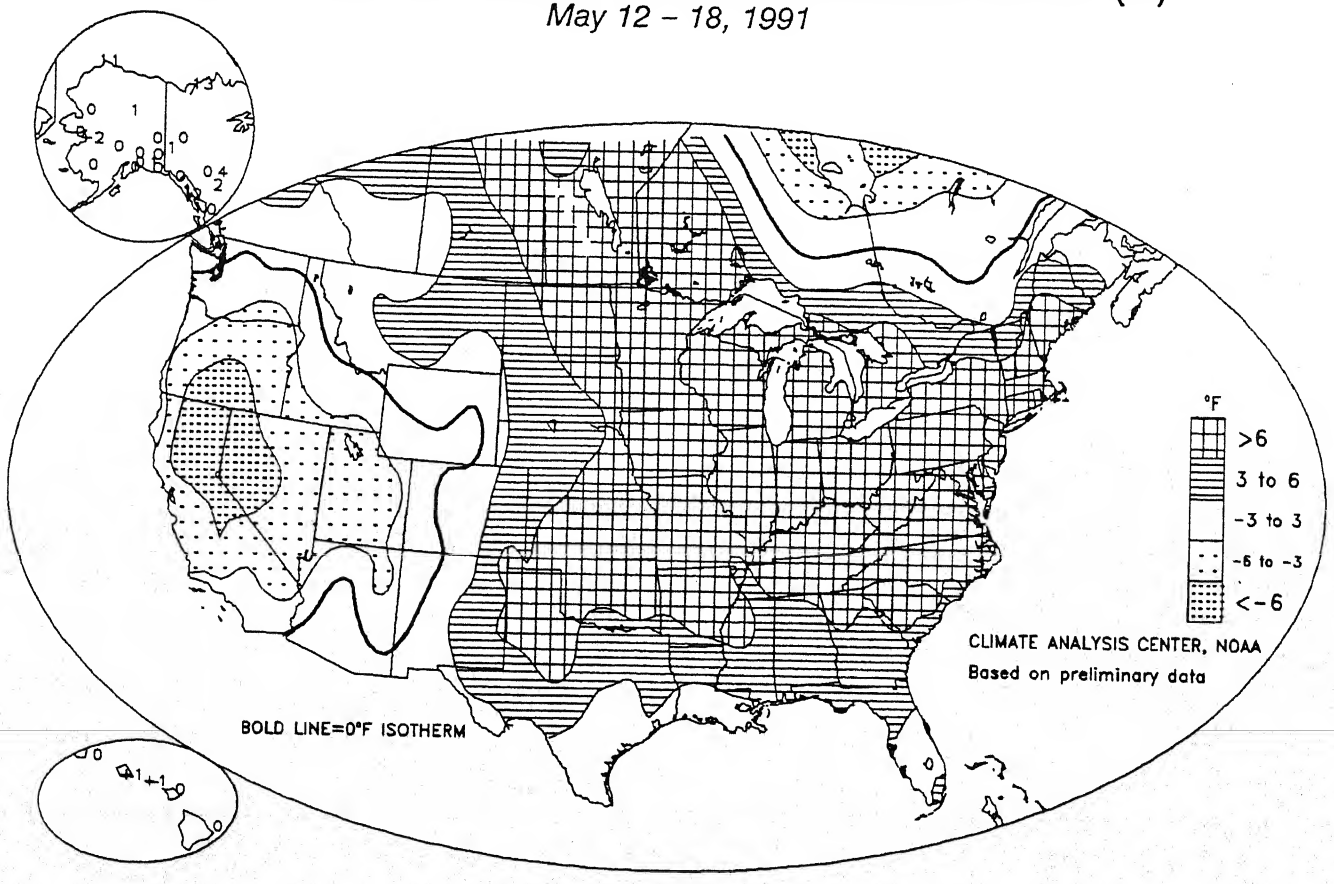


TABLE 2. *SELECTED STATIONS WITH TEMPERATURES AVERAGING 11.5°F OR MORE ABOVE NORMAL FOR THE WEEK OF MAY 12 – 18, 1991*

STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
AKRON, OH	+14.5	73.0	FARGO, ND	+12.4	67.8
MILWAUKEE, WI	+13.6	67.9	GRAND FORKS, ND	+12.2	66.3
MANSFIELD, OH	+13.3	71.9	HOUGHTON LAKE, MI	+12.2	65.7
COLUMBUS, OH	+13.1	74.4	ZANESVILLE, OH	+11.9	72.1
DETROIT, MI	+13.0	70.9	DEVIL'S LAKE, ND	+11.8	63.9
PITTSBURGH, PA	+12.9	72.3	TRAVERSE CITY, MI	+11.7	64.8
TOLEDO, OH	+12.7	71.0	CHARLESTON, WV	+11.6	75.3
INTERNATIONAL FALLS, MN	+12.7	63.7	FLINT, MI	+11.6	67.8
YOUNGSTOWN, OH	+12.6	69.7	HARRISBURG, PA	+11.5	73.0
ERIE, PA	+12.6	67.9	WILLIAMSPORT, PA	+11.5	70.7
CLEVELAND, OH	+12.4	70.7	MOUNT CLEMENS, MI	+11.5	67.8

TABLE 3. *SELECTED STATIONS WITH TEMPERATURES AVERAGING 5.0°F OR MORE BELOW NORMAL FOR THE WEEK OF MAY 12 – 18, 1991*

STATION	DEPARTURE (°F)	AVERAGE (°F)	STATION	DEPARTURE (°F)	AVERAGE (°F)
BLUE CANYON, CA	-9.1	42.0	BAKERSFIELD, CA	-6.4	63.9
REDDING, CA	-8.6	59.9	STOCKTON, CA	-6.3	59.6
RED BLUFF, CA	-7.1	60.0	SEXTON SUMMIT, OR	-6.2	42.6
LOVELOCK, NV	-7.0	50.8	MOUNT SHASTA, CA	-6.0	46.9
MARYSVILLE, CA	-6.8	60.3			

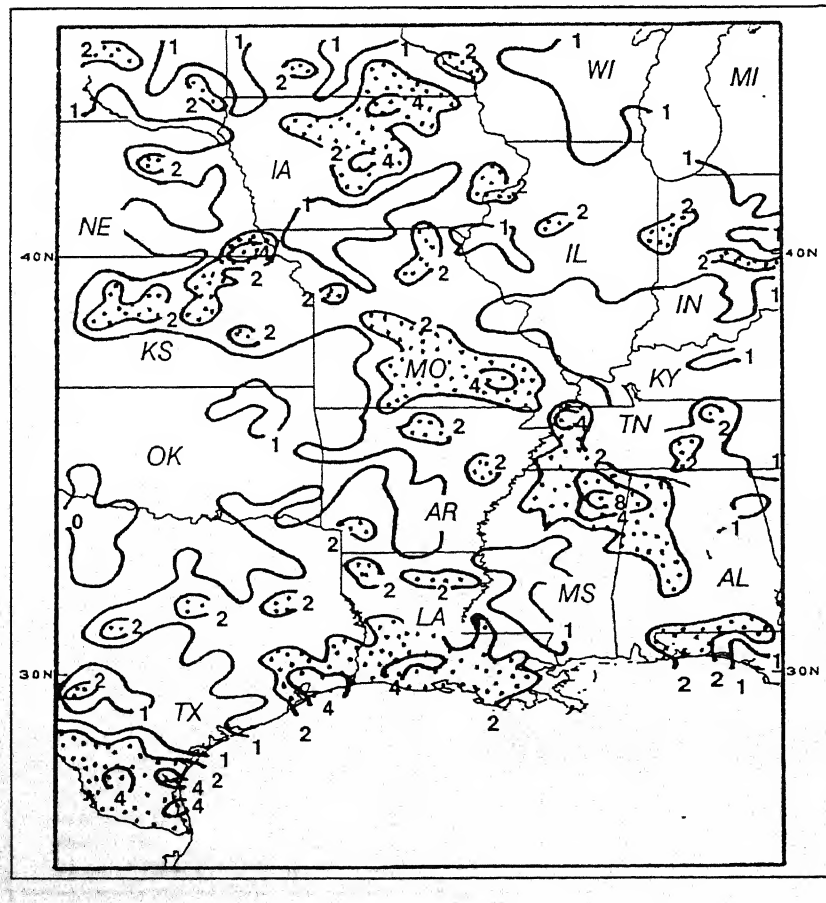
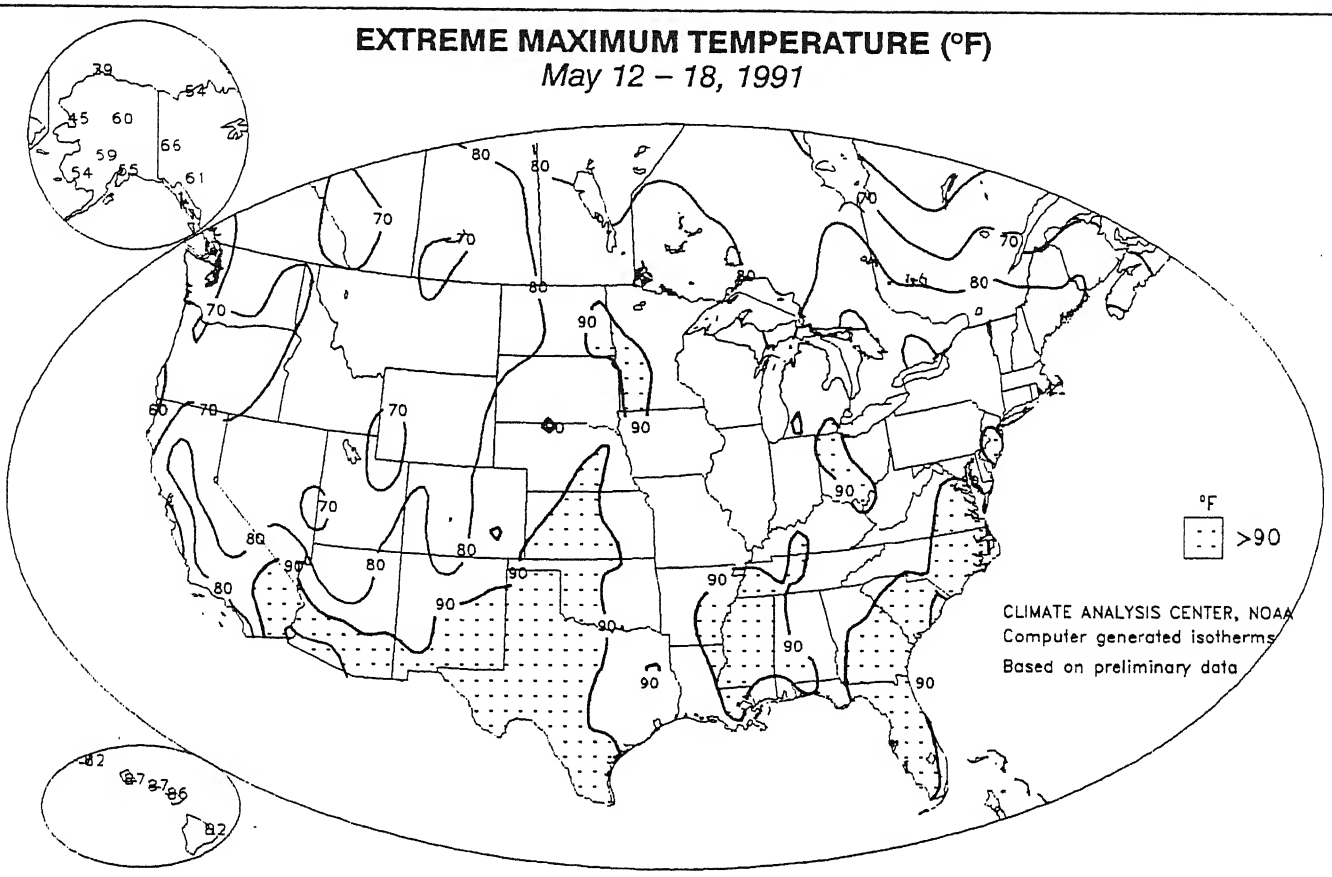


FIGURE 1. Total Precipitation across the southeastern Great Plains and middle and lower Mississippi Valley during May 12–18, 1991. *Isopleths drawn only for 0, 1, 2, 4, and 8 inches. Stippled areas received more than 2 inches. Rainfall totals lower than previous weeks but still above normal were measured across much of the lower Mississippi Valley. In addition, widespread moderate rains and scattered heavier totals were found through much of the nation's mid-section. Portions of the western Corn Belt have been drenched during the last month or so, with another 2–5 inches recorded last week. The heavy precipitation has significantly slowed corn planting in Iowa, where less than half of the five-year normal amount of crop had been planted as of mid-May.*

EXTREME MAXIMUM TEMPERATURE (°F)

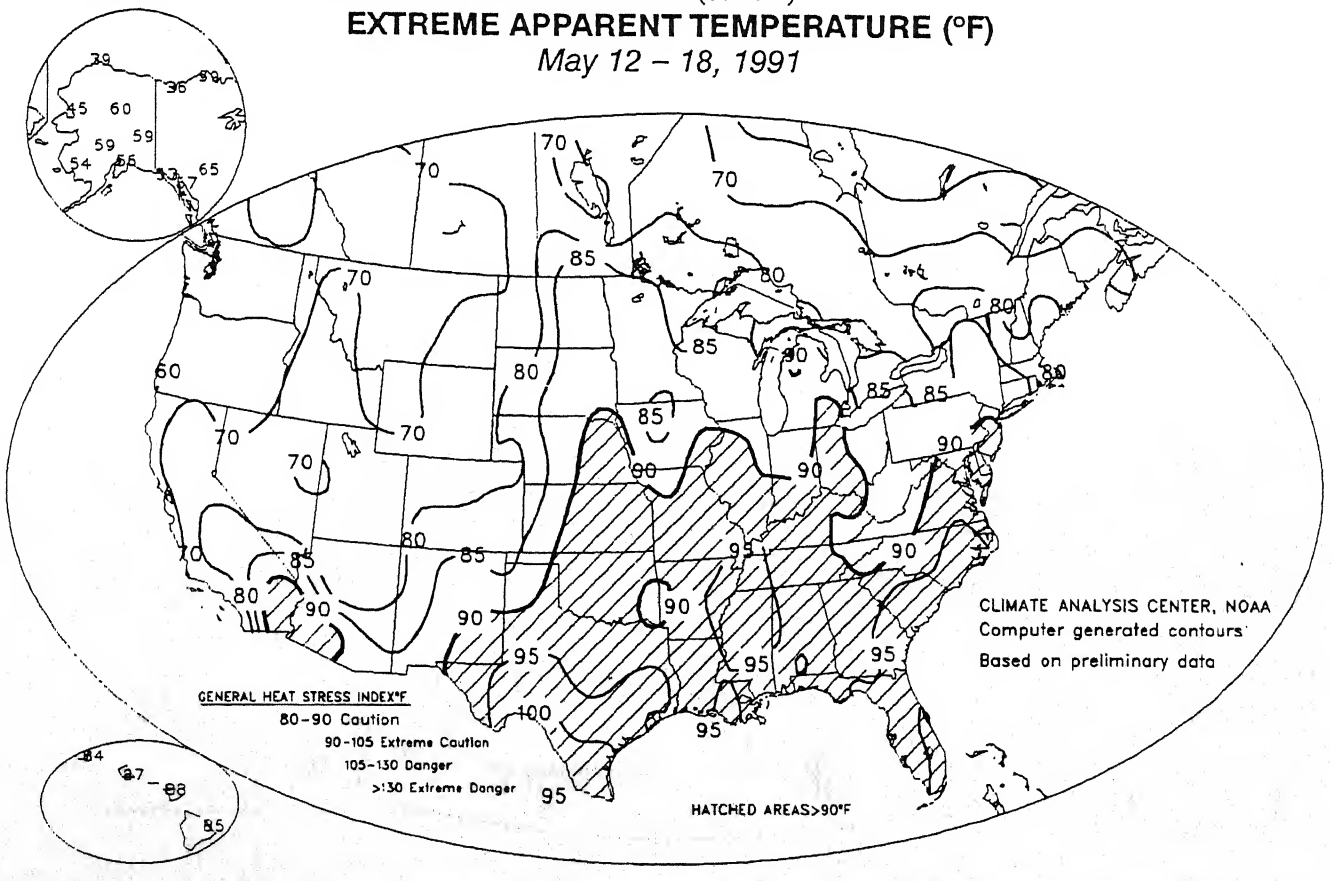
May 12 – 18, 1991



Summer-like conditions prevailed over the eastern two-thirds of the nation and the Southwest during the week, with readings in the nineties reported as far north as the northern Plains and Ohio Valley (top). The high temperatures, along with high relative humidities, allowed for oppressive conditions (apparent temperature >90°F) in the Southwest and from the central and southern Plains to the middle and southern Atlantic coasts (bottom).

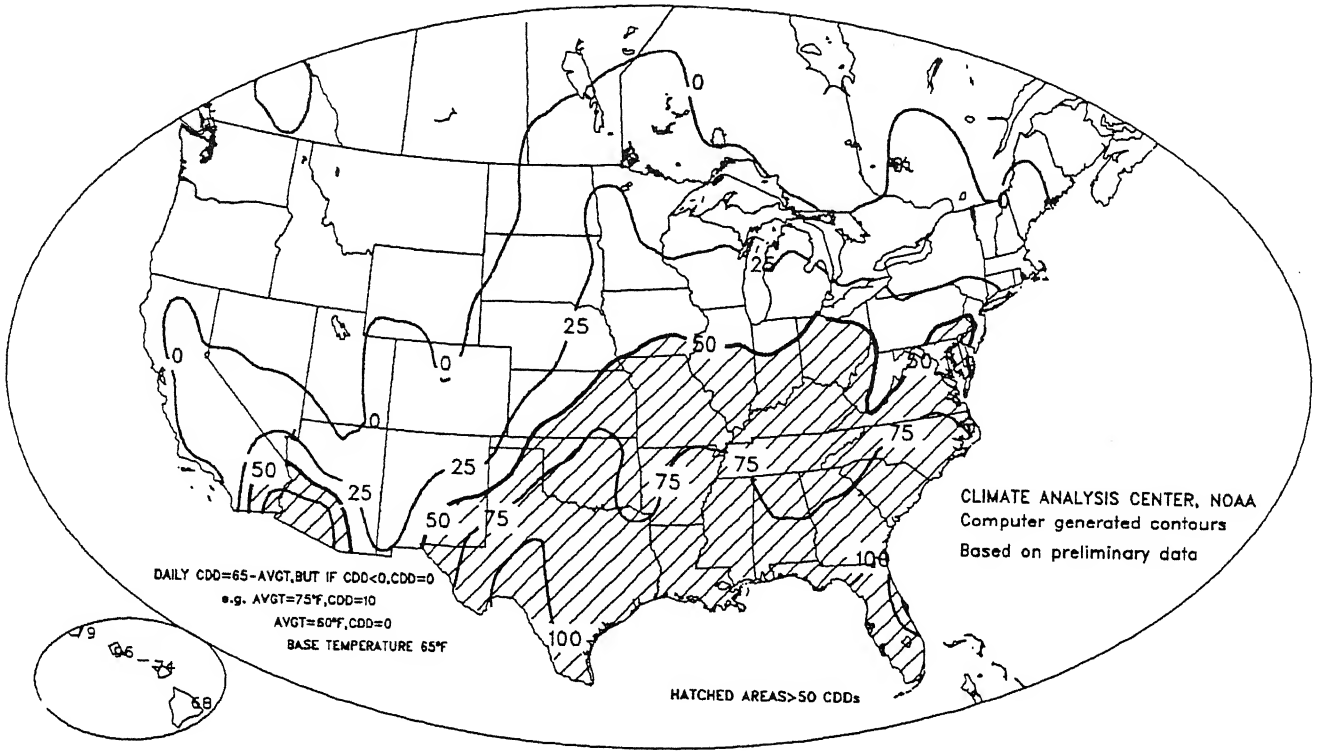
EXTREME APPARENT TEMPERATURE (°F)

May 12 – 18, 1991



WEEKLY TOTAL COOLING DEGREE DAYS

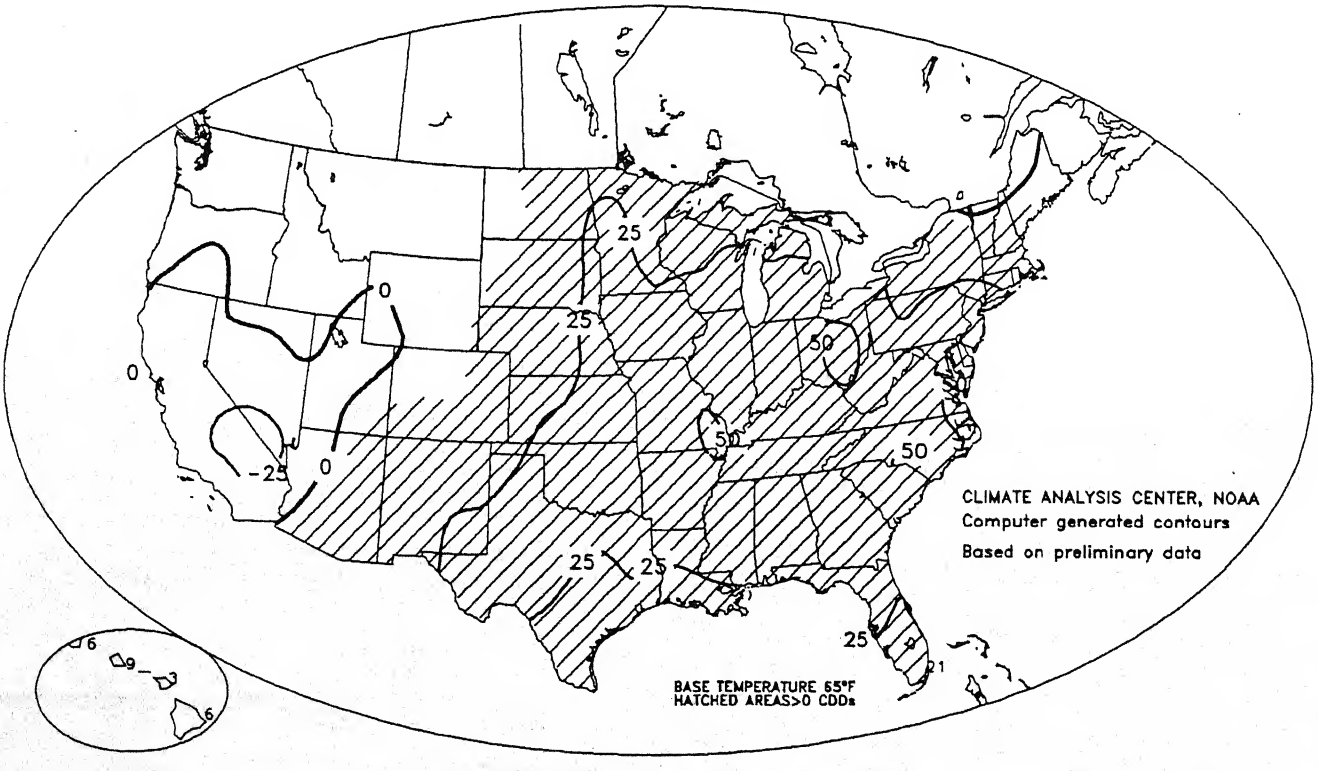
May 12 – 18, 1991



JUNE 8, 1991 WILL BE THE LAST ISSUE IN WHICH DEGREE DAY MAPS WILL APPEAR IN THE WEEKLY CLIMATE BULLETIN ON A REGULAR BASIS. CONTACT THE CLIMATE ANALYSIS CENTER FOR FURTHER INFORMATION (ADDRESS AND PHONE NUMBER ON INSIDE FRONT COVER).

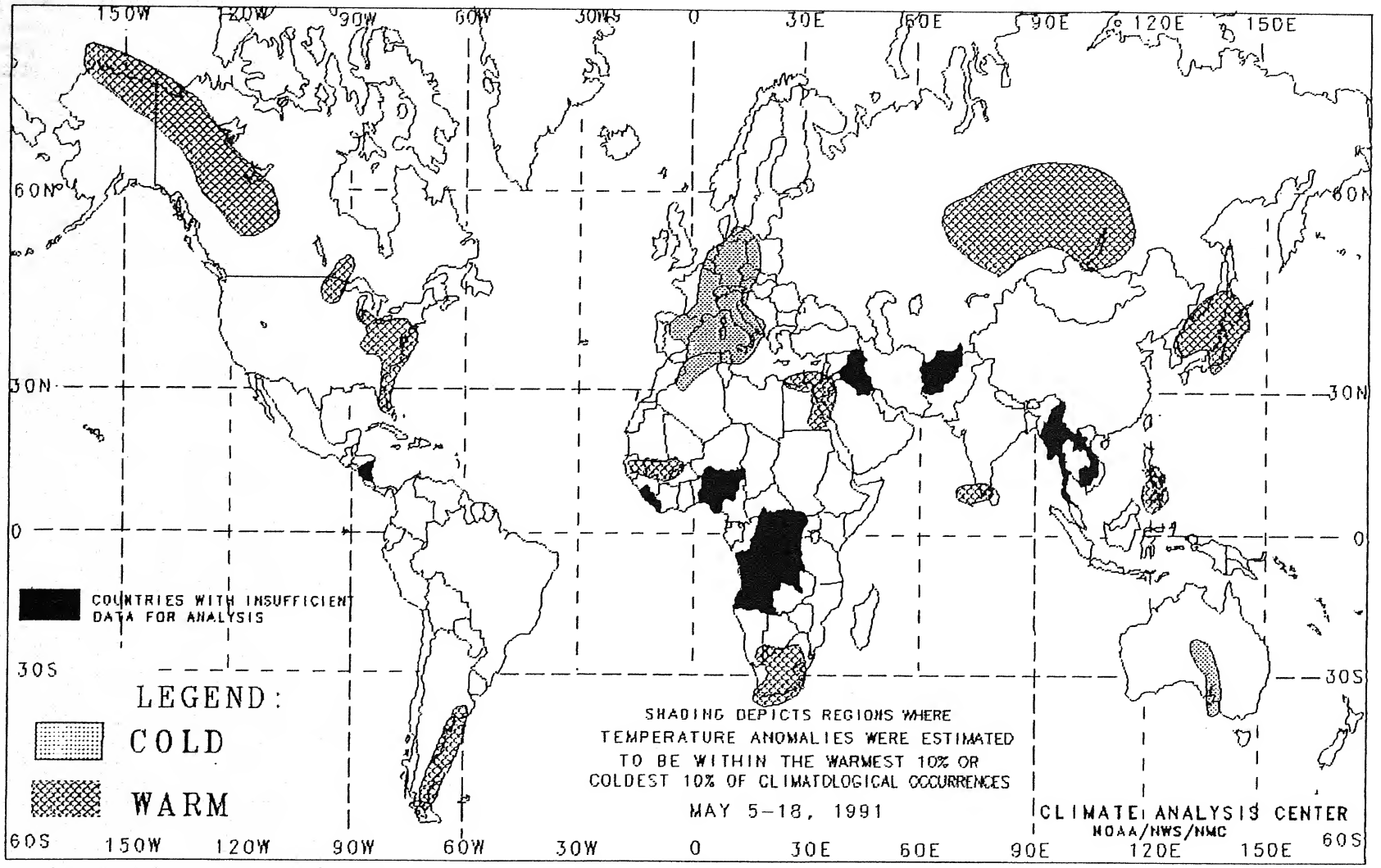
WEEKLY DEPARTURE FROM NORMAL CDD

May 12 – 18, 1991



2–WEEK GLOBAL TEMPERATURE ANOMALIES

MAY 5 – 18, 1991



The anomalies on this chart are based on approximately 2500 observing stations for which at least 13 days of temperature observations were received from synoptic reports. Many stations do not operate on a twenty–four hour basis so many night time observations are not taken. As a result of these missing observations the estimated minimum temperature may have a warm bias. This in turn may have resulted in an overestimation of the extent of some warm anomalies.

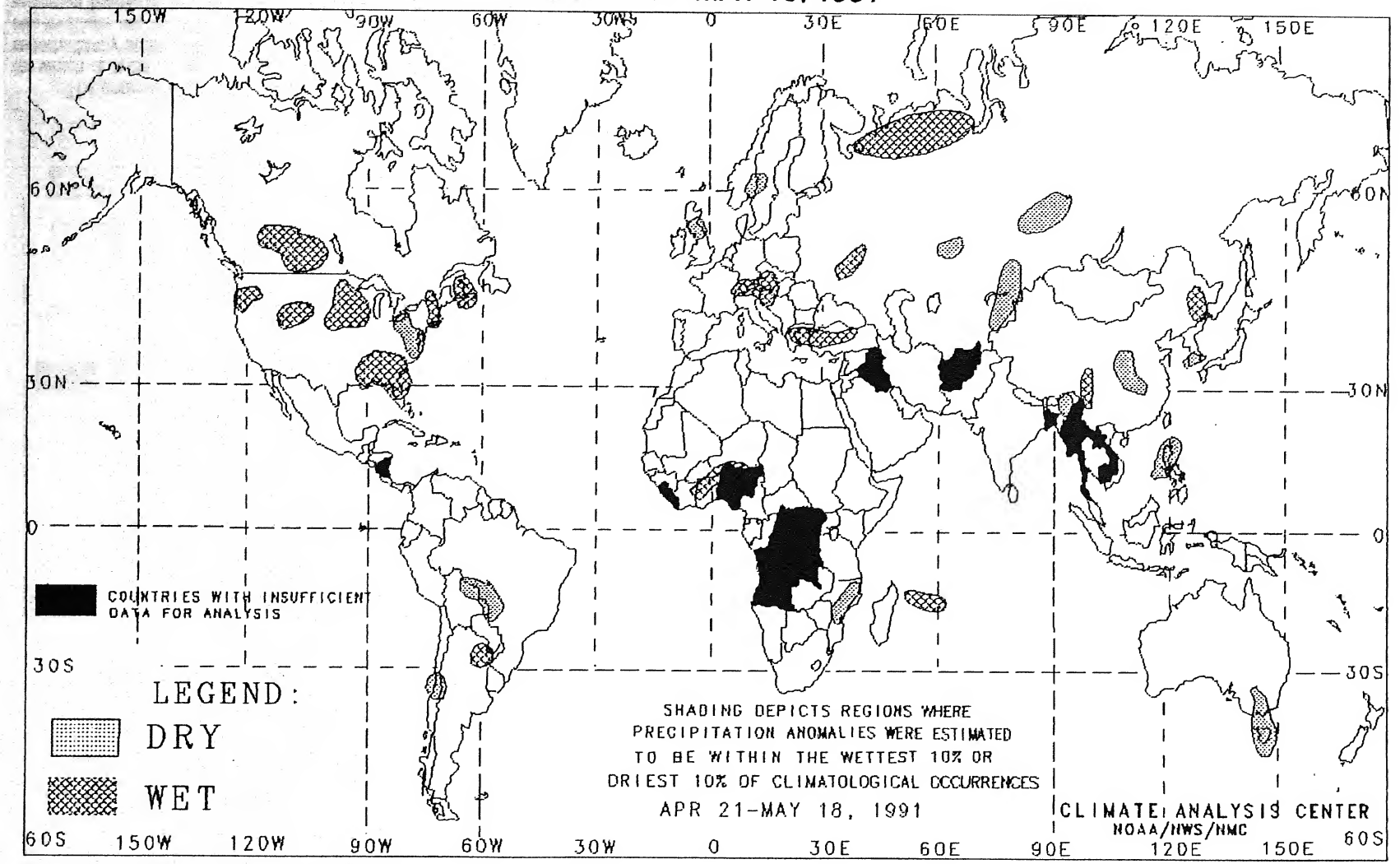
Temperature anomalies are not depicted unless the magnitude of temperature departures from normal exceeds 1.5°C.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

This chart shows general areas of two week temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

4–WEEK GLOBAL PRECIPITATION ANOMALIES

APRIL 21 – MAY 18, 1991



The anomalies on this chart are based on approximately 2500 observing stations for which at least 27 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the four week period is less than 20 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total four week precipitation exceeds 50 mm.

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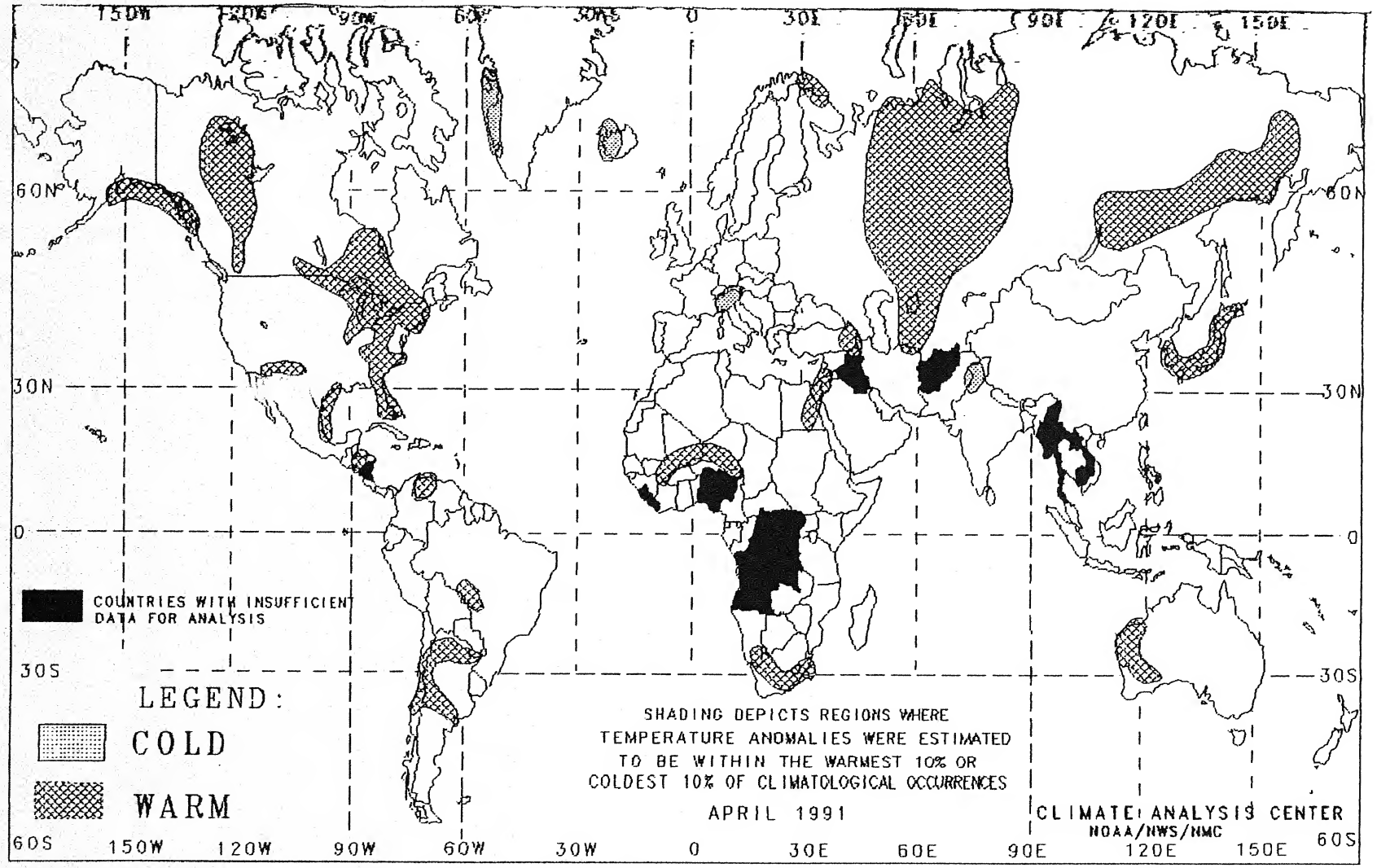
MONTHLY GLOBAL TEMPERATURE ANOMALIES

APRIL 1991



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This chart shows general areas of one month temperature anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

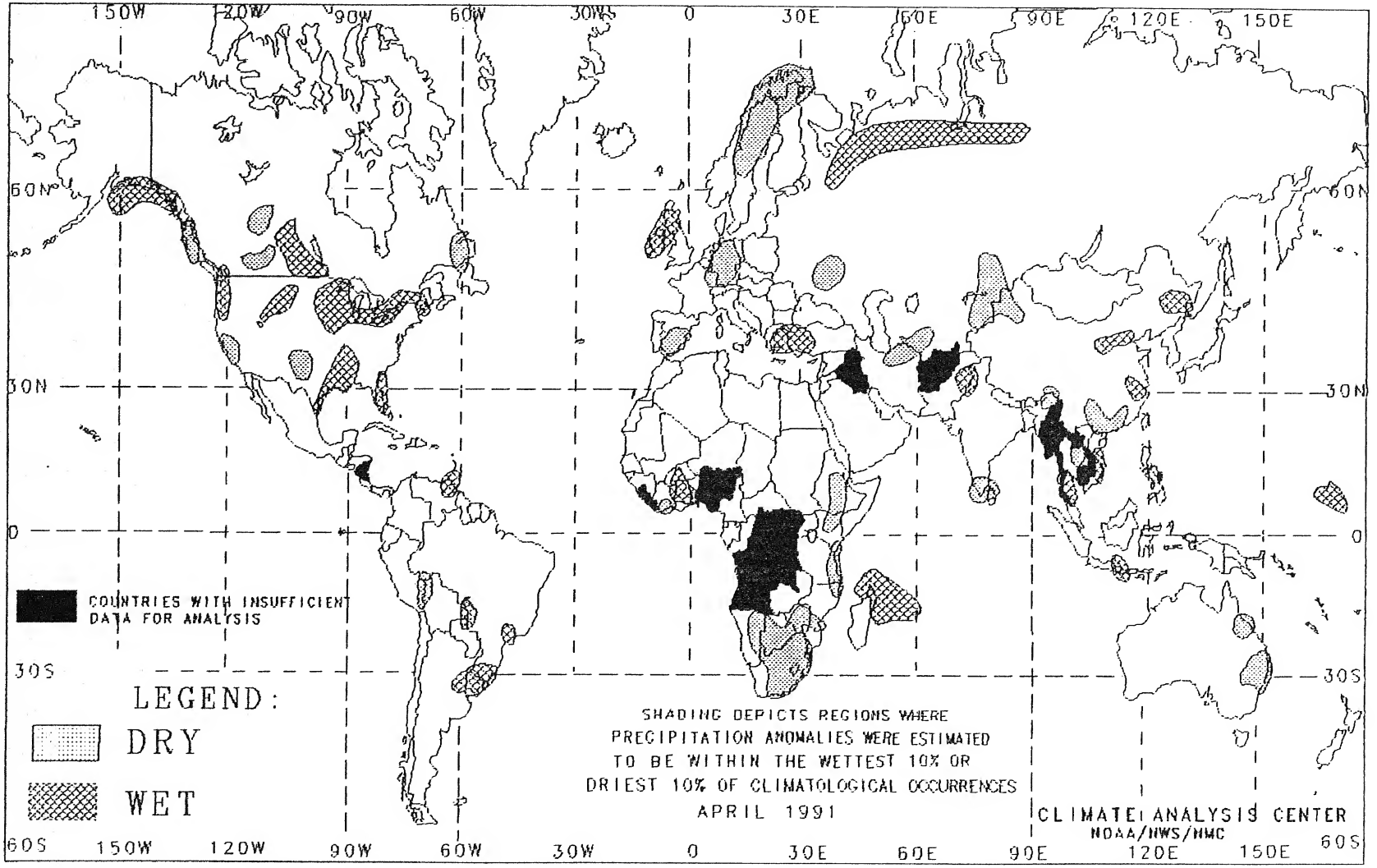
PRINCIPAL TEMPERATURE ANOMALIES

APRIL 1991

REGIONS AFFECTED	TEMPERATURE AVERAGE (°C)	DEPARTURE FROM NORMAL (°C)	COMMENTS
NORTH AMERICA			
Alaska	+4 to +6	Around +2	MILD – 2 to 4 weeks
Western Canada	–3 to +11	+2 to +5	MILD – 2 to 10 weeks
Eastern United States and Southeastern Canada	–2 to +27	+2 to +5	WARM – 2 to 18 weeks
Arizona and New Mexico	+18 to +22	Around +2	Very warm first half of April
Northeastern Mexico and Adjacent United States	+23 to +26	Around +2	Very warm second half of April
Honduras	+24 to +29	Around +2	WARM – 5 weeks
SOUTH AMERICA AND EASTERN PACIFIC			
Venezuela	+26 to +30	Around +2	Very warm second half of April
West–Central Brazil	+24 to +28	+2 to +3	Very warm first half of April
Chile and Argentina	+14 to +23	Around +2	Very warm early and late April
EUROPE AND THE MIDDLE EAST			
Greenland	–19 to –6	–2 to –5	COLD – 2 to 4 weeks
Iceland	Around +1	Around –2	Very cold early and late April
Northern Norway and Adjacent Soviet Union	Around +1	+2 to +3	Very warm first half of April
Northern Italy	–1 to +10	–2 to –5	Very cold second half of April
Eastern Turkey	+8 to +10	+2 to +3	WARM – 6 to 10 weeks
AFRICA			
Egypt and Jordan	+18 to +30	+2 to +3	WARM – 4 weeks
Niger and Mali	+33 to +34	Around +2	Very warm second half of April
South Africa	+20 to +23	+2 to +3	Very warm second half of April
ASIA			
Western Siberia	–3 to +19	+2 to +6	MILD – 2 to 8 weeks
Pakistan and Adjacent India	+23 to +25	Around –2	Very cool middle of April
Eastern Siberia	–11 to 0	+2 to +6	MILD – 4 to 10 weeks
Japan and Korea	+5 to +16	Around +2	WARM – 2 to 10 weeks
AUSTRALIA AND WESTERN PACIFIC			
Western Australia	+20 to +29	Around +2	Very warm second half of April

MONTHLY GLOBAL PRECIPITATION ANOMALIES

APRIL 1991



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In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of one month precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

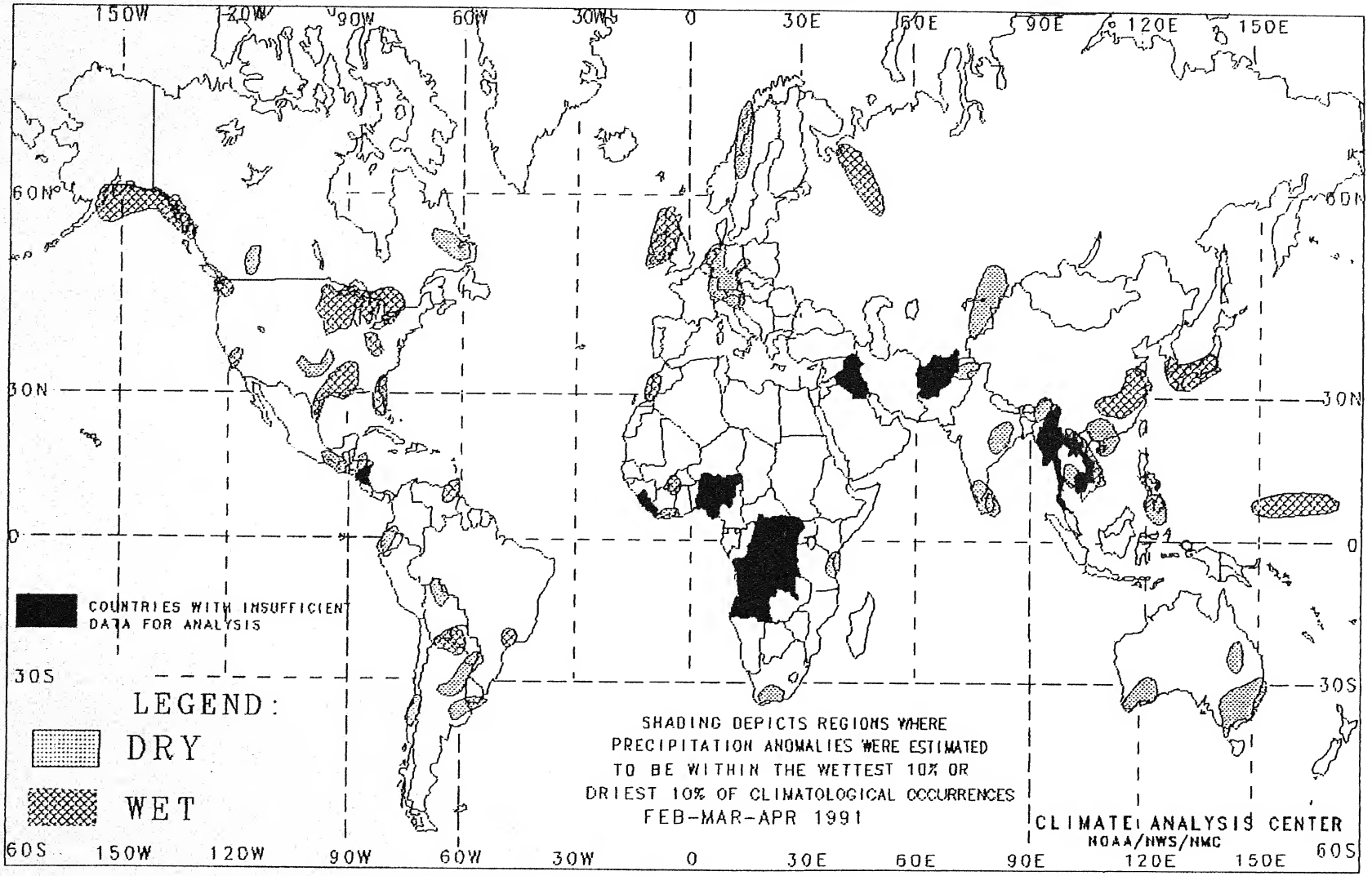
PRINCIPAL PRECIPITATION ANOMALIES

APRIL 1991

REGIONS AFFECTED	PRECIPITATION TOTAL (MM)	PERCENT OF NORMAL	COMMENTS
NORTH AMERICA			
Southern Alaska	110 to 372	149 to 221	WET – 4 to 5 weeks
Western British Columbia	50 to 113	47 to 50	DRY – 4 weeks
Northern Alberta	0 to 1	0 to 7	DRY – 5 weeks
Southern Alberta	0 to 14	0 to 38	DRY – 6 to 10 weeks
Saskatchewan and Manitoba	42 to 80	203 to 335	Heavy precipitation second half of April
Eastern Quebec	15 to 32	25 to 49	DRY – 8 weeks
Pacific Northwest	95 to 241	178 to 274	Heavy precipitation first half of April
Northern Rockies	65 to 98	185 to 226	WET – 4 to 5 weeks
North–Central United States and South–Central Canada	94 to 217	154 to 283	WET – 4 to 12 weeks
Central California	0 to 1	0 to 2	DRY – 5 weeks
Northwestern Texas and Eastern New Mexico	0 to 2	0 to 7	DRY – 10 weeks
South–Central United States	205 to 555	205 to 664	WET – 2 to 8 weeks
Florida and Georgia	160 to 269	210 to 342	WET – 5 to 10 weeks
SOUTH AMERICA AND EASTERN PACIFIC			
Venezuela	96 to 109	289 to 502	WET – 5 weeks
Bolivia and Peru	11 to 87	36 to 46	DRY – 7 weeks
West–Central Brazil	148 to 190	208 to 229	WET – 4 weeks
Southeastern Brazil	Around 176	247 to 456	Heavy precipitation second half of April
Uruguay and Argentina	225 to 521	239 to 401	WET – 5 to 7 weeks
EUROPE AND THE MIDDLE EAST			
British Isles	83 to 161	171 to 204	WET – 4 weeks
Spain	5 to 20	13 to 43	DRY – 4 weeks
Germany and France	9 to 16	21 to 38	DRY – 6 to 10 weeks
Northern Scandinavia	8 to 24	26 to 46	DRY – 4 to 5 weeks
Southern Ukraine	3 to 27	10 to 68	DRY – 9 weeks
Northern European Soviet Union	35 to 65	174 to 273	WET – 4 to 8 weeks
Turkey and Greece	70 to 153	172 to 409	WET – 2 to 10 weeks
AFRICA			
Southwestern Ivory Coast	29 to 56	25 to 40	DRY – 8 weeks
Togo, Benin, and Burkina Faso	59 to 287	189 to 270	WET – 2 to 4 weeks
Ethiopia and Kenya	15 to 61	18 to 35	DRY – 4 to 9 weeks
Mozambique and Tanzania	9 to 36	5 to 15	DRY – 4 to 9 weeks
Southern Africa	0 to 23	0 to 29	DRY – 5 to 10 weeks
Madagascar and Indian Ocean Islands	136 to 781	238 to 614	WET – 5 to 10 weeks
ASIA			
Iran and Adjacent Soviet Union	12 to 52	18 to 50	DRY – 6 weeks
Northwestern China and Adjacent Soviet Union	0 to 14	0 to 37	DRY – 8 to 10 weeks
Pakistan	60 to 113	313 to 562	Heavy precipitation first half of April
Southern India	3 to 4	4 to 5	DRY – 10 weeks
Extreme Eastern India	9 to 21	4 to 9	DRY – 14 weeks
Northeastern China	54 to 78	162 to 274	WET – 2 to 10 weeks
East–Central China	46 to 60	217 to 249	WET – 2 to 13 weeks
Southeastern China	250 to 313	150 to 151	WET – 2 to 4 weeks
Southern China	6 to 59	9 to 34	DRY – 6 to 10 weeks
Central Thailand	9 to 20	11 to 31	DRY – 7 weeks
Southern Thailand	97 to 197	238 to 244	WET – 2 to 6 weeks
Vietnam	121 to 167	273 to 515	WET – 10 weeks
AUSTRALIA AND WESTERN PACIFIC			
Java	146 to 370	203 to 248	WET – 2 to 4 weeks
Marshall Islands	402 to 520	167 to 204	WET – 2 to 4 weeks
Northeastern Australia	1 to 4	2 to 8	DRY – 14 weeks
Eastern Australia	3 to 4	4 to 5	DRY – 14 weeks

3–MONTH GLOBAL PRECIPITATION ANOMALIES

FEBRUARY – APRIL, 1991

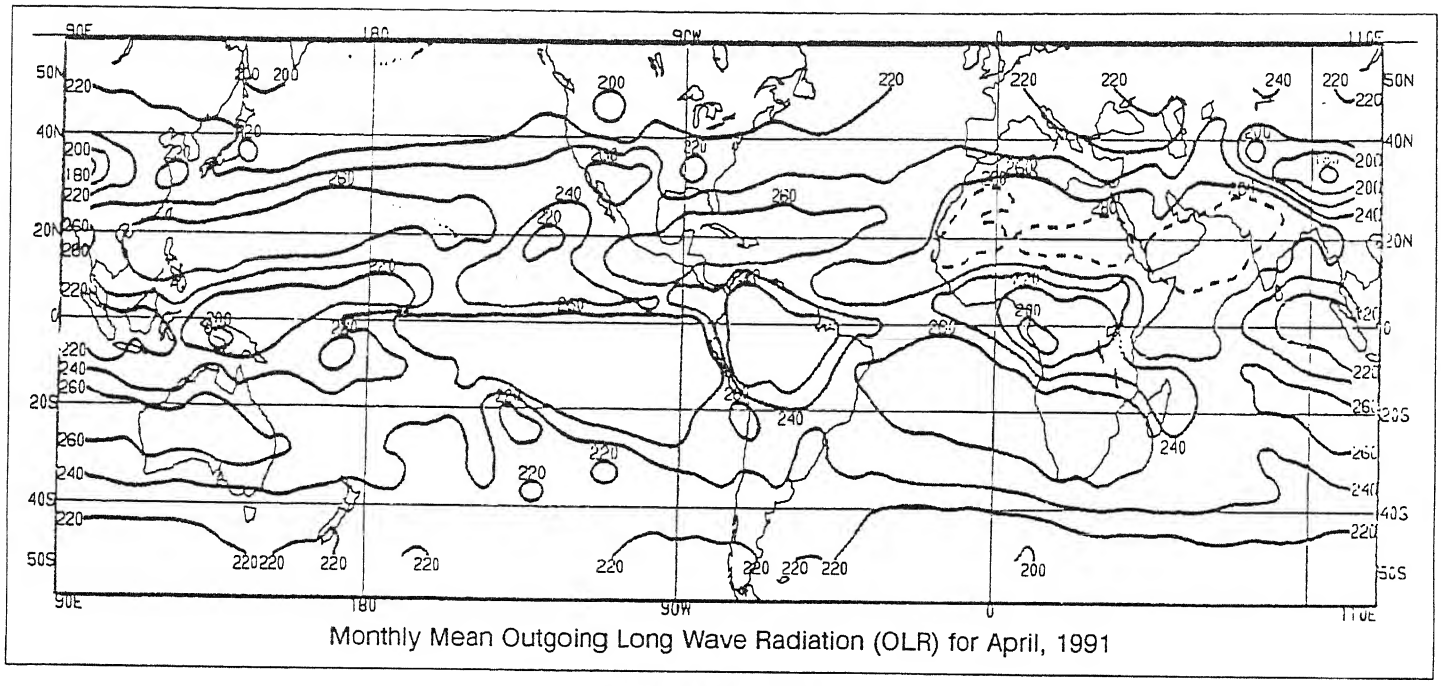


The anomalies on this chart are based on approximately 2500 observing stations for which at least 81 days of precipitation observations (including zero amounts) were received or estimated from synoptic reports. As a result of both missing observations and the use of estimates from synoptic reports (which are conservative), a dry bias in the total precipitation amount may exist for some stations used in this analysis. This in turn may have resulted in an overestimation of the extent of some dry anomalies.

In climatologically arid regions where normal precipitation for the three month period is less than 50 mm, dry anomalies are not depicted. Additionally, wet anomalies for such arid regions are not depicted unless the total three month precipitation exceeds 125 mm.

In some regions, insufficient data exist to determine the magnitude of anomalies. These regions are located in parts of tropical Africa, southwestern Asia, interior equatorial South America, and along the Arctic Coast. Either current data are too sparse or incomplete for analysis, or historical data are insufficient for determining percentiles, or both. No attempt has been made to estimate the magnitude of anomalies in such regions.

The chart shows general areas of three month precipitation anomalies. Caution must be used in relating it to local conditions, especially in mountainous regions.

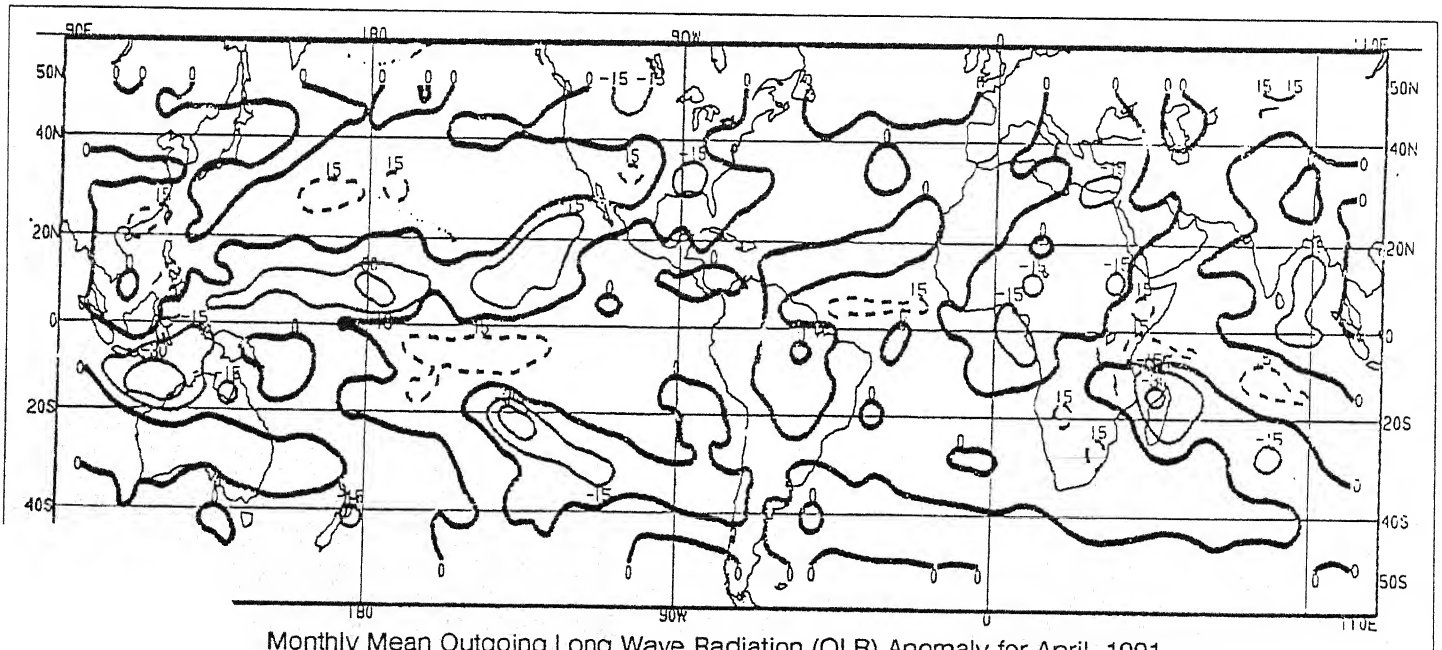


Monthly Mean Outgoing Long Wave Radiation (OLR) for April, 1991

EXPLANATION

The mean monthly outgoing long wave radiation (OLR) as measured by the NOAA-9 AVHRR IR window channel by NESDIS/SRL (top). Data are accumulated and averaged over 2.5° areas to a 5° Mercator grid for display. Contour intervals are 20 Wm^{-2}, and contours of 280 Wm^{-2} and above are dashed. In tropical areas (for our purposes 20°N - 20°S) that receive primarily convective rainfall, a mean OLR value of less than 200 Wm^{-2} is associated with significant monthly precipitation, whereas a value greater than 260 Wm^{-2} normally indicates little or no precipitation. Care must be used in interpreting this chart at higher latitudes, where much of the precipitation is non-convective, or in some tropical coastal or island locations, where precipitation is primarily orographically induced. The approximate relationship between mean OLR and precipitation amount does not necessarily hold in such locations.

The mean monthly outgoing long wave radiation anomalies (bottom) are computed as departures from the 1979 - 1988 base period mean. Contour intervals are 15 Wm^{-2}, while positive anomalies (greater than normal OLR, suggesting less than normal cloud cover and/or precipitation) are dashed and negative anomalies (less than normal OLR, suggesting greater than normal cloud cover and/or precipitation) are solid.



Monthly Mean Outgoing Long Wave Radiation (OLR) Anomaly for April, 1991